

POTOMAC TECH

JOURNAL

Close Up: Globalization

Gov. Warner's postponed trip to Asia may be a case of 'better late than never' for area tech firms.
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THE REGION'S TECHNOLOGY NEWS SOURCE

OCTOBER 7, 2002 \$3

Virginia patent fight ends

By Tania Anderson
Staff reporter

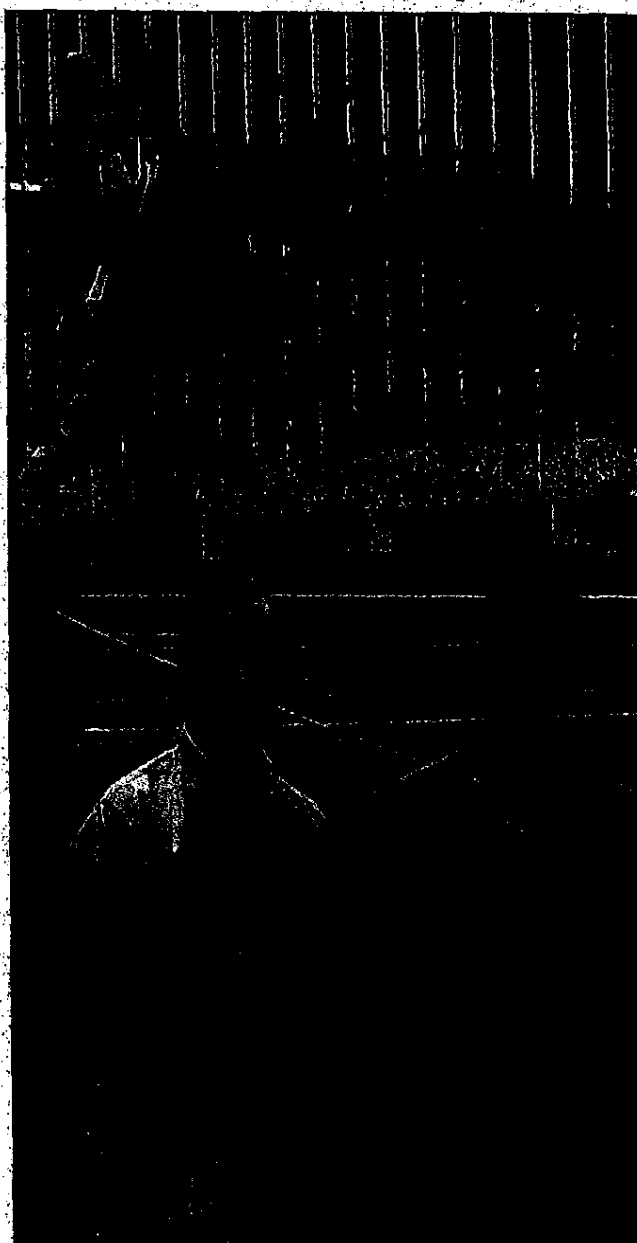
A long battle with the U.S. Patent and Trademark Office came to an end last week for three entrepreneurs who make up DE Technologies Inc.

The small company, which got its start in Blacksburg, Va., was granted a patent on Oct. 1, which the principals say will drastically change how international e-commerce is conducted.

The victory comes after five years of making changes in the application to suit the Patent Office's requirements and to convince examiners that the technology was original and necessary.

The battle had twists and turns that included the *Wall Street Journal*, a Virginia congressman and the splintering of the company into three locations in two countries, leaving an area presence in Reston, Va.

"You're looking at a beat-up warrior," Ed Pool, a co-founder of



Bruce Lagerman (left) and Ed Pool have won a patent that was filed in 1997, eliminating a major obstacle to product rollout.

See PATENT, page 8

EXHIBIT

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PATENT: Initial patent OK came in '99; final approval only last week

FROM PAGE 1

the company who now resides in Quebec, said of his drawn-out quest to gain a patent for the Borderless Order Entry System he created with Doug Maurer, the company's chief technology officer, who has remained in Blacksburg.

DE Technologies' Borderless Order Entry System is an Internet or intranet application that integrates all the various transactions that need to take place in an international sale of goods. The system automatically tallies the charges associated with international sales, such as port charges, insurance and taxes. For example, a \$15,000 car sold and exported from Virginia to Rotterdam in The Netherlands could have 48 different tariffs and charges applied to it. The multi-lingual system would automatically tally all those charges in real time and in the buyer's currency.

"In international transactions, we deal with a whole different and very complex point of sale," Pool said.

The system, DE Technologies' executives said, also has the ability to identify purchases of certain chemicals

throughout the world that could be related to biological weapons.

The patent, originally filed in 1997, was given a preliminary stamp of approval in late 1999, which almost guaranteed final patent approval. But at the eleventh hour, Pool said, it was rejected. Patent Office documents said "there is no novelty or non-obviousness implied in these claims."

Pool believes a *Wall Street Journal* article on the application published a few days before it was to be approved created too much hype, causing patent examiners to pull it back. However, a Patent Office spokesman said 80 percent of applicants are rejected in the first round.

Pool also believes that U.S. Rep. Rick Boucher, a Democrat who represents a district in southwest Virginia, put a stop to the patent when he gave an impassioned speech on the House floor criticizing certain types of patents and using DE Technologies' application — without citing the company by name — as an example of what the Patent Office should not be approving.

Pool added that DE Technologies' research and development facilities

were in Boucher's district.

Boucher denies he had any influence over the Patent Office's rejection of the application, but he has introduced legislation that reforms the way it approves patents that address processes already in use.

"If a practice is common in the physical world, transporting them to the Internet is not novel. [Pool] wanted everybody who sells anything on the Internet to pay him money, but he never invented anything," Boucher said. "If he wants to go to Canada, that's just fine."

Pool envisions his system as being the international e-commerce world's equivalent of SWIFT, an industry-owned cooperative that supplies secure messaging services to financial institutions. The system handles about \$6 trillion a day in payment messages.

Pool and his new president, Bruce Lagerman — who runs the U.S. headquarters from a small office in Reston — have been unable to further develop the system or raise funds for the company. They blame that on not having had the prestige of a U.S. patent. They have already obtained patents in Singapore

and New Zealand and are also pursuing patents in other countries.

With the newly granted patent in hand, the next step for DE Technologies is to build a pilot international e-commerce system in Singapore, Australia and New Zealand, with the help of a team of trade experts and software engineers as soon as funds are raised.

"The problem we have now is the question of 'where have you guys been?'" said Lagerman, who was originally hired by Pool as his legal counsel. "It's insulting because we've been there."

Worldwide Internet b-to-b and b-to-c commerce is expected to hit \$6.8 trillion in 2004, according to Forrester Research. North America represents a majority of this trade, but its dominance will fade as some Asian-Pacific and Western European countries reach "hypergrowth" over the next two years, Forrester states.

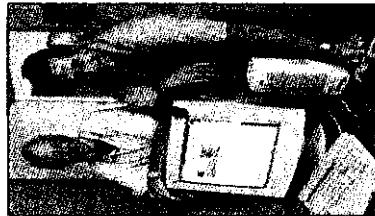
Lagerman is confident that the technology is addressing a young industry. "A lot has happened in six years," he said. "But it's important to understand that international e-commerce is still in its infancy."



An Improbable life

Poet and actor
uses his art to fight
depression and stigma

EXTRA



Bright future

E-commerce patent
from a Franklin County
company has a world
of potential

BUSINESS



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Doug Maier (left) and Ed Pool, partners in DE technologies in Union Hall, have obtained a patent on a system of conducting international business online.

NATALEE WATERS / THE ROANOKE TIMES

Partners' patent has world of potential

From Franklin County comes an invention that could have a major impact on global e-commerce

By MEGAN SCHNABEL / THE ROANOKE TIMES

UNION HALL — Ed Pool's office is small; his aspirations are not. From a strip mall in Franklin County, Pool and his partner in DE Technologies have developed an Internet system that they say will revolutionize international e-commerce.

Their invention — they call it the Borderless Order Entry System, or BOES — is designed to help small and mid-sized U.S. businesses import and export products via the Internet.

The system handles all aspects of international e-commerce, Pool says. It translates prices into multiple currencies and product descriptions into any number of languages. It figures shipping and taxes and duties. It creates all the necessary electronic documents.

Pool believes his automated system represents the only way small players can compete on the worldwide market. "There's resources they need that they can't afford to buy in the paper world," he said.

DE Technologies isn't the only company trying to smooth the way for international business via the Internet. A number of larger players already offer some international e-commerce services.

But the Franklin County company holds a unique — and valuable — asset: a patent.

The U.S. Patent and Trademark Office agrees with Pool and his partner, Doug Mauer, that their system is worth protecting, which means that the many other companies engaging in international e-commerce could be infringing on their technology.

Pool and Mauer don't know how much money — if any — they'll make on their invention. And even with the patent, the partners face substantial hurdles. They haven't secured any venture capital;

Virginia investors haven't been terribly interested in the technology; and DE Technologies' rural address leaves it at a disadvantage when dealing with Silicon Valley or New York venture capitalists.

Then there's always the chance that someone will challenge the patent, which could lead to an expensive court battle.

But Pool remains convinced his years of work on BOES will pay off — that they already have paid off, with the issuance of the patent.

"You're at the big-stakes poker game now," he said. "You haven't won anything, but at least you're at the table."

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The idea behind the Borderless Order Entry System might not seem particularly novel today, when hundreds of companies are active in Internet sales. But Pool and Mauer started working on the system long before e-commerce — let alone international e-commerce — was widespread.

"This may not be rocket science in the year 2000, but try eight years ago," Pool said.

Pool, who used to sell construction equipment on the international market, teamed with Mauer,

PLEASE SEE PATENT/2

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BUSINESS 2 The Roanoke Times, Sunday, July 9, 2000

FROM PAGE 1

Patent

co-founder of BizNet Technologies in Blacksburg, about five years ago. Their first joint project was Universal Shopping Service, a Web site launched in 1996 that allowed American companies to sell their goods to international consumers. The site — www.ushop.com — permitted customers to shop in a variety of languages and calculated costs in a number of international currencies.

U-Shop didn't draw much business, but it did attract attention and served as a valuable test bed for the BOES technology.

They won a \$120,000 contract to create an e-commerce backbone system. They had hoped to bid on the implementation portion of the contract, which Pool said could have been worth millions of dollars, but the government canceled the procurement.

Instead, they've spent much of the last 3½ years dealing with the U.S. Patent and Trademark Office. Pool even shut down his excavating company so he could devote more energy to DE Technologies. He figures they've already spent \$600,000 in time and energy to get the company off the ground.

They've been operating on little money. Pool sold U-Shop to raise quick cash, and they raised \$60,000 in outside investments, which gave them enough money to file for patent protection in about 30 foreign countries.

They've been trying to scare up \$30 million to \$50 million in venture funding but have come up short.

"We have to have it," Pool said. "I'm not having much suc-

cess, though, with the Virginia folks. It's a state of mind. . . . They don't understand patents. I've had guys tell me, 'Well, a patent doesn't mean anything.' "

In fact, the rewards for winning a patent can be enormous. A patent is often the only asset a small company can leverage to win funding: Most venture capitalists won't sink money into a concept that could be easily duplicated by a competitor.

DE Technologies' patent hasn't officially been published yet, but Pool received a Notice of Allowance, which means the patent office has finished its investigation of the claims and will print the final documents within a month or so.

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With their Borderless Order Entry System patent, which protects both software and a method of conducting business, Pool and Mauer have stepped squarely into the midst of an international controversy.

The question: Should the U.S. Patent and Trademark Office issue patents for so-called "computer-implemented business methods"?

These patents protect not just technical aspects — nuts and bolts — but entire business models. Priceline.com patented its name-your-own-price auction system. A Massachusetts company called Open Market Inc. patented key aspects of e-commerce including online shopping carts and real-time credit card transactions.

In recent years, the number of these patents issued by the U.S. Patent and Trademark Office has grown significantly, from 143 in 1996 to 583 last

year.

Detractors say such patents are often too broad and their continued issuance will stifle innovation and lead to monopolization of critical Internet sectors.

One of the best-known — and most debated — of these patents is the one that online bookseller Amazon.com received for its "one-click" ordering system, which permits customers to order merchandise without having to re-enter shipping and billing information each time. Within days of receiving the patent, Amazon sued rival Barnesandnoble.com for using a similar one-click system. During the key Christmas shopping season, Barnesandnoble.com was forced to retool its Web shop and revert to a two-click check-out.

The patent, and Amazon's strict enforcement of it, have drawn the ire of some in the Internet community, who have accused the bookseller of monopolistic practices. At least one Web site — www.nowebpatents.org — is devoted to promoting a boycott of Amazon.

Gary Hecker, an intellectual property attorney in Los Angeles who has represented Sun Microsystems and Apple, believes this debate is just another verse of an old song.

"Whenever there are new technologies . . . that become a hotbed for patenting, there is a lot of concern that it may be an impediment to technological development," he said.

In the 1980s, when the patent office first started issuing patents on computer software, detractors warned that such patents would threaten the growth

of the software industry. Instead, he said, software designers simply figured out ways to work around patents.

Pressure is building on the patent office to re-examine the way it handles Internet patents. Hecker and others say the office lacks the resources and expertise to figure out whether Internet business methods truly represent new innovations, and the Internet is changing too quickly for the patent office to keep pace. The patent office also has been hampered by lack of a comprehensive database of existing software technologies, which until recently couldn't be patented.

Almost 90 percent of intellectual property attorneys surveyed by PricewaterhouseCoopers said they don't believe the patent office adequately addresses the issue of existing inventions when it reviews e-commerce business method patents.

Patent office spokeswoman Brigid Quinn dismisses the idea that patent examiners are overwhelmed by applications for Internet business method patents. The number of these patents has been growing, she said, but they still represent only a small fraction of total patents: just 2,600 of 289,000 patent applications received last year.

The patent office has developed a plan to better deal with Internet patents, however. It includes a pledge to work more closely with the software industry, to better train examiners, to revise examination guidelines and to expand its searches.

Software industry members have formed the Software Patent Institute, which built a searchable database of software technologies designed to help the

patent office determine whether patent claims truly represent new innovations.

"There are a lot of really innovative business methodologies being implemented on the Internet," Hecker said. "The idea that business methods are protectable as a concept is a good one. What needs improvement is the scrutiny by the patent system of those inventions. The standard doesn't need to be raised. Implementation of existing standards needs to be improved."

Pool and Mauer insist they want to work with, not shut down, competitors who might be infringing on DE Technologies' patent — a group the partners say includes just about anyone currently conducting international commerce over the Internet.

They've started talking to companies that Pool calls "the big boys" — IBM, UPS and others. "They've got something we want, and that's distribution," he said. "We've got something they want, and that's a patent."

Pool said they don't want to create a "holy war." They'd rather license the Borderless Order Entry System to other companies — which could create a handsome income for DE Technologies — and form partnerships to develop an international standard for electronic commerce.

That will be the only way to ensure the future growth of e-commerce, Mauer said. "If you have 150 different systems . . . they're all going to have their own proprietary way of dealing with things," he said.

Because the patent hasn't been published yet, it's too early to say how IBM and others will respond to their overtures, Mauer said. But he believes they really will have no choice but to cooperate once the patent is enforceable. And he thinks that at least some companies will be eager to collaborate. "The environment is ripe now for people who are competing to recognize that they need standards," he said.

Working toward an international e-commerce standard is an admirable goal, said Janine Hiller, professor of business law at Virginia Tech and head of the school's Center for Global Electronic Commerce. International trade is fraught with pitfalls, especially for small businesses, and anything that smooths the way could be a terrific invention, she said.

"If you could do this on the Internet, you could do this off the Internet," she said. "It's huge."

But it won't be easy to get the international community to play along, warned Hiller, who serves on a United Nations subgroup that has been studying standardization for electronic commerce.

"It would have to have extremely wide acceptance in the commercial community that would make it impossible for international groups not to use it," she said.

"They have quite a road in front of them," Hiller said. "Getting the patent sometimes is not the most difficult part. The most difficult part is enforcing it."

Mauer feels confident that their patent will stand up to scrutiny. The patent office "put us through all the hoops," he said. And the patent isn't just for a business method, either; it also covers software.

"I wouldn't say that we're on a power trip, that we need to dictate any of this," Mauer said. They'd even consider selling the patent, if the price was right, he said.

Any competitors who want to talk to them about licensing their technology are welcome to come to Virginia, Pool said. He knocked on doors for years and got no response, he said, and now it's someone else's turn to travel.

"I no longer go no place," he said. "I spent six years begging, on my knees, crawling."

Megan Schnabel can be reached at 981-3140 or megans@roanoke.com

today's news

U.S. Patent Office to Issue Broad Patent on International E-Commerce System



UNION HALL, Va., June 6 /PRNewswire/ -- DE Technologies announced today the U.S. Patent and Trademark Office will issue a broad patent on its Borderless Order Entry System (BOES) technology. BOES, developed by DE Technologies, will enable any size business to import and export products from any foreign country using the Internet. The significance of the BOES technology is that for the first time in commercial history, small business will be able to take part in the enormous global trade market (over \$5 trillion) without being hampered by inexperience in conducting international transactions. The scope of the patent encompasses all international e-commerce transactions whether B2B or B2C.

BOES will allow businesses to conduct a complete international transaction from EX Works (Point of Origin - Warehouse) through DDP (Delivery Duty Paid) including intermediary steps, such as FAS (Free Along Ship) and C.I.F. (Cost, Insurance, Freight). The system creates the necessary electronic documents, such as: purchase orders, pro forma invoices, ocean and airway bills of lading, and commercial invoices. BOES will also conduct the international transaction in any language or currency for ease of use; calculate air, sea and land freight costs; compute taxes and import/export duties; and process electronic title transfers. Electronic payment resolution as an alternative to the standard letter of credit is also provided.

DE Technologies' Managing Partner, Edward Pool, the BOES inventor, is an expert in international trade having honed his skills by working in a Fortune 125 company as well as running his own import/export corporation. According to Mr. Pool; "Currently, the only businesses capable of cost effectively exporting their products overseas are multi-national companies with international trade departments. The economic efficiencies of this business-to-business patented technology will allow those small and medium-size companies to effectively compete with major corporations in the international marketplace and significantly expand their market share."

Using the BOES technology, DE Technologies has developed an international electronic commerce backbone system for the U.S. Department of Commerce Foreign Commercial Service and is now in the process of forming alliances with major U.S. companies in the international e-commerce arena. The company is also seeking to form alliances with foreign corporations who are interested in licensing DE Technologies' foreign patent rights.

Companies interested in obtaining more information about BOES are invited to visit the website at <http://www.detechnologies.com> or contact DE Technologies at 540-576-3555.

SOURCE DE Technologies

Web Site: <http://www.detechnologies.com>

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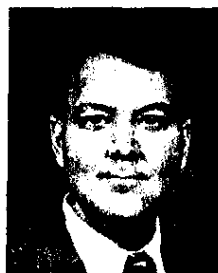
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EXHIBIT

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InternetInfo.column: "Business Model Patent for International E-Commerce Transactions"



BY W. SCOTT PETTY

W. Scott Petty, a Patent Attorney with King & Spalding, focuses on intellectual property issues for computer software, telecommunications and Internet companies. Scott can be

contacted via telephone at 404.572.2888 or by e-mail at spetty@kslaw.com.

First, Priceline.com claims patent ownership of using a computer to conduct a reverse auction. Next, Amazon.com asserts that it owns "one-click" on-line shopping and successfully enforces its patent by obtaining a preliminary injunction against BarnesandNoble.com. Who will own the next "blockbuster" patent covering an e-commerce business model? DE Technologies LLC, an international trade company in Virginia, may join Priceline.com and Amazon.com in the biz model "Patent Hall of Fame" as a result of its pursuit of a patent covering international trade deals over the Internet.

Although you and your clients may not recognize DE Technologies as a technological innovator in the international trade business, Ed Pool, Managing Partner, is working to change that identity issue. Mr. Pool is a life-long entrepreneur who, in the '70s and '80s, gained international sales experience by selling heavy construction equipment in Europe and Asia. Working with a software programmer in the '90s, Mr. Pool developed a computer system called the Borderless Order Entry System (BOES). BOES enables a business to complete product transactions with foreign countries using the Internet. Following a path successfully taken by Internet entrepreneurs Jay Walker of Priceline.com and Jeff Bezos of Amazon.com, Mr. Pool filed an U.S. patent application for the BOES technology in 1997. In May 2000, the U.S. Patent &

Trademark Office notified DE Technologies of its intent to grant a patent for the BOES technology.

Despite the fact that the Patent Office has not yet formally issued the patent, Mr. Pool and his lawyers are busily contacting companies in international trade with offers to license the pending patent. The license proposal includes a 0.3% fee for each computer trade deal that crosses borders. Although the 0.3% royalty rate may, at first glance, appear to represent a relatively small transaction fee, Mr. Pool is no doubt aware of published research estimating that e-commerce transactions will exceed \$6.8 trillion in 2004. DE Technologies' patent counsel is familiar with the potential high dollar stakes of international e-commerce, as the attorney for the company has reportedly undertaken the licensing program on a contingency fee basis.

What is the scope of the inventive business model covered by DE Technologies' pending patent? In an article published by the *Wall Street Journal*, Mr. Pool claims that "If you can do currency conversions, file customs electronically, or calculate air, sea or truck freight, then you must obtain a license from us. . . . We were the first people to reduce it all to computer to computer." Turning to a representative patent claim allowed by the Patent Office, independent Claim 1 defines:

A process for carrying out an international transaction over [the Internet] using computer to computer communications comprising the steps of:

- (a) selecting a language in which to view catalogue information on products;
- (b) selecting a currency in which to obtain a price of the products;
- (c) selecting products to be purchased and a destination for said selected products to be purchased thereby triggering a calculation of all costs involved in moving said

selected products to said destination based upon said destination and said selected products; and
(d) ordering said selected products thereby triggering an electronic funds transfer authorization and generation of electronic title configured to define ownership and facilitate passage of said selected products and payments of international taxes and duties.

The allowed patent application distinguishes the prior art by asserting that currency conversions, customs, import/export duties and shipping for international sales are not handled on a computer-to-computer basis by conventional transaction systems.

Consistent with their vocal criticism of the Priceline.com and Amazon.com patents, critics of business model patents are actively complaining about the Patent Office's intended grant of a patent for the BOES technology. Critics are asserting that a patent covering a computer system for handling international transactions is yet another example of the Patent Office's failure to properly examine patents covering traditional business processes. A potential licensee has alleged that the BOES technology is an obvious improvement of conventional international trade practices because freight forwarders have used computers for years to calculate rates. In addition, DE Technologies has competition in the international transaction field, as ClearCross and Vastera Inc., which is partially owned by Ford Motor Company, also market international e-commerce systems.

Although a patent issued by the Patent Office carries with it a presumption of validity, the BOES patent may soon be tested in court. Mr. Pool has indicated in interviews that DE Technologies is prepared to go to court if necessary to enforce the BOES patent. The aggressive licensing program for the BOES technology, publicized by DE Technologies in advance of a patent award, may attract an unexpected result: a law suit challenging the validity of the patent or the Patent Office's withdrawal of the Notice of Allowability in view of public criticism of the pending patent award. **(PT)**



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Dell Inc.**Company Profile**

Dell is the world's leading computer systems company. Dell designs, builds, and customizes products and services to satisfy a range of customer requirements. From the server, storage and professional services needs of the largest global corporations, to those of consumers at home. Dell does business directly with customers, one at a time, and believes they do it better than anyone on the planet.

Value Proposition

Vastera's TradeSphere Exporter solution provides Dell with scalability, configurability, and global compliance. Vastera's solution has made Dell's GTM a more efficient process.

Challenges

Dell was challenged by delayed shipments, the need for more consistently accurate shipping documents, as well as limited growth in the average number of export transactions per day and the need for higher restricted party screenings per day.

Solution

Vastera's TradeSphere Exporter solution provides electronic document delivery, reducing overall cycle time and expedites Customs clearance. Dell's average number of delayed shipments per 1000 shipments was reduced from 72 to six, offering a 91% reduction in delayed shipments.

In 1997, prior to implementing Vastera, Dell was processing 250 transactions per day, and screening 500 transactions a day. Through Vastera's solution, Dell's export transactions have grown to 4500 per day and their screenings have grown to 70,000 per day.

"Vastera is a global compliance standard for Dell Computer. Vastera's platform provides the scalability and flexibility Dell needs in order to deliver individual solutions for its customers while

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MARKETPLACE

MONDAY, AUGUST 28, 2000

A Billion-Dollar Patent?

Software Developer Is Seeking To Protect Process Using Internet for Foreign Trade

By WILLIAM M. BULKLEY
Staff Reporter of THE WALL STREET JOURNAL

UNION HALL, VA.—If the U.S. Patent Office does what it has said it will do, companies using the Internet for computer-to-computer international trade will have to pay a royalty fee to Ed Pool.

Mr. Pool, 45 years old, hails from this tiny lakeside hamlet. In the early 1990s, during a brief fling at importing goods from Russia, he commissioned a software program to help with logistical problems. He later applied for a patent based on the software, covering the computerization of the entire trade process, including the creation of customs declarations and shipping documents, along with services such as insurance and letters of credit.

E-BUSINESS

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In May, the patent office notified Mr. Pool that it would soon issue him a broad patent covering "a process for carrying out an international transaction ... using computer-to-computer communication." A spokeswoman for the patent office said a patent could still be denied, if an examiner concluded that someone else had invented a process before his patent application was filed. However, outside patent attorneys say that issuing a patent after such a letter is virtually automatic.

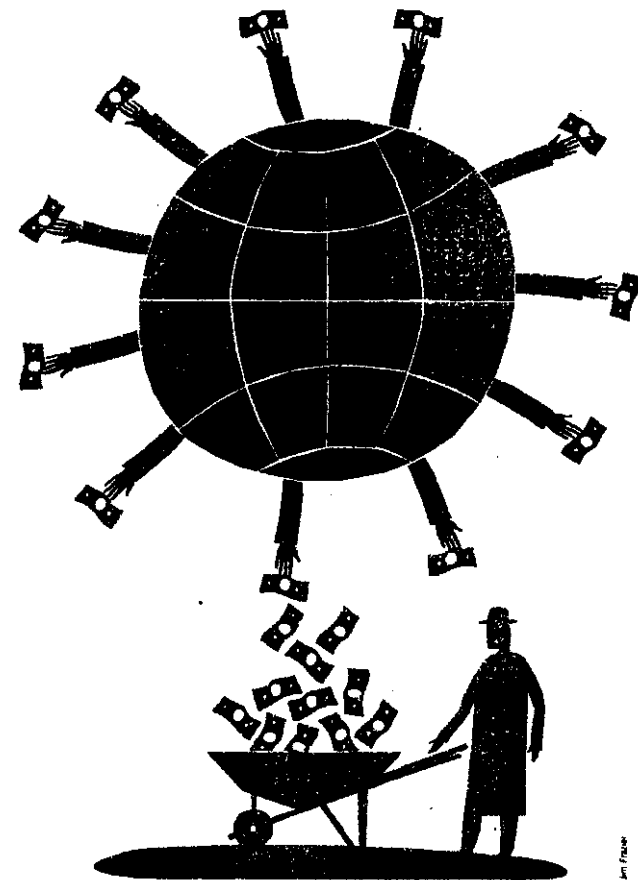
When and if Mr. Pool's patent becomes final, lawyers hired by his company, DE Technologies LLC, say anyone conducting computer-to-computer international trades over the Internet without the permission of DE Technology will infringe on the company's intellectual property. As Mr. Pool puts it, "If you can do [computer-to-computer] currency conversions, file customs electronically, or calculate air, sea or truck freight, then you must obtain a license from us. ... We were the first people to reduce it all to computer to computer. We're a small company, and we're a classic example of why the patent system is important."

Mr. Pool's goal is to collect a fee equal to 0.3% of each computerized trade deal across borders. That could add up quickly. Forrester Research, an e-commerce research firm, expects about \$6.8 trillion in e-commerce in 2004. If even 10% of that is cross-border, DE Technologies' fee demands could amount to \$2.4 billion in that year alone.

Working from his one-room office in a prefabricated building here, Mr. Pool has notified "every company you can think of" in international trade of the pending patent. So far, none of these companies, which include giants like International Business Machines Corp. and DHL International, have signed license agreements, Mr. Pool says. Many decline to talk to him at all, although he says DE Technologies has tracked visits to its Web site by employees of many of these companies.

IBM and DHL decline to comment on Mr. Pool's patent claim, citing policies against discussing intellectual-property issues. Not so From2.com Inc., a Miami-based company that provides online shipping services to overseas destinations. Leon Fulic, chief executive of From2.com, says his lawyers believe the patent is invalid, calling the notion that Mr. Pool will successfully defend it "unlikely."

Mr. Pool also is sure to face resistance from a number of small companies that are marketing international e-commerce systems and services, including Vastara Inc. of Dulles, Va.,



which is 28%-owned by Ford Motor Co., and ClearCross Inc. of New York. A Vastara spokesman says he hasn't studied DE Technologies' claims. ClearCross declines to comment.

Defending DE Technologies' claims is Paul Gupta, a leading patent litigator, at Boston's Sullivan & Worcester. Mr. Gupta, co-chairman of an American Bar Association intellectual-property subcommittee, says he was so impressed by the patent that he took the unusual step of taking the client on a contingency-fee basis. He won't collect any money unless he is able to negotiate patent royalties.

Whatever the outcome, Mr. Pool's case is a dramatic example of a controversial new type of patent involving "business methods." Such patents, which cover a business process rather than a physical invention or a software program, leaped in popularity after a 1998 federal appeals-court ruling upheld their validity. The fastest-growing category of these patents involves the Internet, as companies race to get a lock on nearly every type of supposed

innovation. Amazon.com Inc., for example, has patented "one-click" shopping, and has successfully sued to keep archrival Barnes & Noble.com Inc. from using it.

But critics say many of these patents should never have been granted because they either cover obvious processes or are simply electronic forms of traditional activities. Henry B. Gutman, a prominent patent litigator for Simpson Thacher & Bartlett in New York, blames an overburdened patent office that has been "forced to make judgments regarding entire areas of experience they haven't previously had to deal with."

Stacie Kilgore, an analyst with Forrester Research, says it is "ridiculous" that the patent office might give Mr. Pool a patent on his process. Freight forwarders have used computers to calculate rates for years, she says, and several companies sell software to do the work. "We're talking about basic processes here. There are a lot of people already doing this," she says.

Officials at the patent office decline to comment specifically on Mr. Pool's application. But a spokeswoman says business-method patents are examined with extra care. About 60% of such patents are granted, she says, compared with 70% for other types of patents.

Please Turn to Page B6, Column 4

Software Developer Seeks Broad Patent For Internet Process

Continued From Page B1

Indeed, assuming Mr. Pool's patent is issued, his company will have a powerful legal weapon, because the patent office's examiners have spent more than three years seeking reasons to deny it, concluding it was both novel and nonobvious.

Mr. Pool learned the intricacies of international trade at heavy-equipment maker FMC Corp. in the 1970s. After a stint as a small importer of gray-market heavy equipment from Asia, he started his own contracting business in the western corner of Virginia, working on erosion-prevention projects. That business dried up in 1992. "Then Russia blew apart," Mr. Pool says. "I saw opportunity."

He flew to Moscow to study the situation, and spotted a selection of infrared night-vision equipment in a street kiosk. After tracking down the maker, he started pitching Russian "nightsopes" to U.S. police departments for half the price of U.S.-made products.

Demand was high; but with the ruble fluctuating, duties changing and freight rates shifting, Mr. Pool says he had trouble quoting firm prices. He contracted with Douglas Mauer, a software developer in Blacksburg, Va., to develop a computer system that could be regularly updated and would spit out prices that could be locked in.

When he described the system to Randolph N. Reynolds, vice chairman of Reynolds Metal Co., whom he met through a government-sponsored program for small exporters, he says Mr. Reynolds told him: "Patent it, son. Patent it." Messrs. Pool and Mauer, who together own DE Technologies, filed their patent application in 1997.

To raise funds for filing patent applications in 31 foreign countries, Mr. Pool sold an old car, an 18-foot boat and some land he had been hoping to use for a corporate headquarters. A bit short on cash, he sometimes falls back on his experience as a contractor and jumps in his bulldozer for an excavation project.

EXHIBIT

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